

REMARKS

Applicants have studied the Office Action dated June 18, 2003 and have made amendments to the claims. It is submitted that the application, as amended, is in condition for allowance. Claims 1-36 are pending. Claims 1, 2, 4, 5, 7-10, 13, 14, 16, 17, 19-23, 25, 28, and 31-35 have been amended. Reconsideration and allowance of the pending claims in view of the above amendments and the following remarks are respectfully requested.

Overview of the Present Invention

The present invention is directed to a data processing system, computer readable medium and method for performing database operations. The data base operations are performed by executing a "query string" that comprises a database query command to be executed by a database search engine. The exemplary embodiments of the present invention use the Structured Query Language (SQL) as the database query language. The exemplary embodiments of the present invention assemble these query strings, that comprise a database query command to be executed by a database search engine, by reading database query command elements, including a query language command and command arguments, that are stored in query element tables. These query element tables are able to be, but do not need to be, relational database tables themselves. The query element tables, however, comprise at least one of a query language command and a command argument. See, for example, specification at page 7, lines 6-13.

Claim Amendments

Applicants have amended the independent claims to more clearly describe this aspect of the present invention. An example of this clarification is in amended claim 1, which has been amended to include the following elements:

reading a first plurality of elements of a first query from a first set of one or more query element tables, the first plurality of elements and the one or more

query element tables comprising at least one of a query language command and a command argument;

assembling a query string from the first plurality of elements, the query string comprising a database query command to be executed by a database search engine; and

executing the first query string to retrieve results from one or more source data tables.

The other independent claims have been similarly amended for clarification. The dependent claims have been amended to conform to the terminology used in the independent claims from which they depend. Support for these amendments can be found in the specification at, for example, page 6, lines 14-20 and page 7, lines 6-13.

Dependent claims 14 and 29 have been amended to more clearly specify that the “second plurality of elements contain data used to specify the location in which data elements are to be stored in the target data table.” Support for this amendment is found in the specification at, for example, page 16, lines 3-13.

Overview of the Beavin Reference

The Beavin reference discloses a relational data base management system that includes a query processor that permits consideration of alternative user-specified access paths. The Beavin reference teaches accessing and retrieving user data that is stored in relational database tables based upon database query commands that are provided by a user. Once a user provides this query command, the processing of the Beavin disclosure operates to perform the data base query specified by the user in that query command. See Beavin at column 5, lines 11-13.

Rejection under 35 U.S.C. 102(b) as Anticipated by Beavin

The Examiner rejected claims 1-36 under 35 U.S.C. § 102(b) as being anticipated by Beavin et al. (U.S. 5,940,819). This rejection is respectfully traversed.

The Beavin reference describes the database files as “tables” in accordance with conventional relational database nomenclature. The “tables” of the Beavin reference contain the data that is stored and queried by the relational database management system. Beavin at column 2, lines 60-67. In contrast to the present invention, the Beavin reference does not teach tables that contain data base query elements, which are the elements of commands that are supplied to the database management system to perform a desired search. The “tables” of Beavin differ from the “query element tables” of the claimed invention in that “query element tables” as are claimed in the amended claims of the present invention, “comprise at least one of a query language command and a command argument.”

Furthermore, the amended claims recite claim elements of “assembling a query string from the first plurality of elements; and executing the first query string to retrieve results from one or more source data tables.” The “first plurality of elements” are read from one or more query element tables and are specified to comprise “at least one of a query language command and a command argument” in the amended claims. Applicants respectfully assert that the teaching of Beavin does not include “reading a first plurality of elements of a first query from a first set of one or more query element tables, the first plurality of element and the one or more query element table comprising at least one of a query language command and a command argument” as is claimed in the amended claims.

Applicants further respectfully assert that the “query string” of the amended claims comprises “a database query command to be executed by a database search engine.” This is in contrast to the teaching of Beavin, which includes joining two or more tables, which are database files containing user data, to create a new resulting table.

Applicants respectfully point out that the first plurality of elements from which the query string is assembled in embodiments of the present invention are read from one or more query element tables that comprise at least one of a query string and a command argument . Applicants respectfully assert that the Beavin reference does not teach, suggest or make obvious reading a plurality of elements from one or more tables, with the one or more elements comprising at least one of a query language command and a command argument , and then assembling a query string from that plurality of elements, as is recited in the amended claims.

Amended Claims

Claims 1, 16, 31 and 33 have been amended to include the clarifications described above. Independent claim 35 has been amended to more clearly identify the claimed data structure as including “a name of a query element table that includes arguments to be used in composing a database command to process data, the database command comprising a database query command to be executed by a database search engine. As discussed above, Beavin does not teach, suggest or make obvious a query element table that includes arguments to be used in composing a database command to process data, the database command comprising a database query command to be executed by a database search engine. For at least the reasons discussed above, Applicants respectfully assert that the amended independent claims distinguish over the Beavin reference. Applicants further respectfully assert that SQL table operations, which allow linking of multiple tables in a single statement, as cited by the Examiner, is not a teaching of a “query element table that includes arguments to be used in composing a database command to process data, the database command comprising a database query command to be executed by a database search engine” as is claimed by amended claim 35.

For at least these reasons, Applicants respectfully assert that the subject matter of the independent claims is distinguished from the teachings of the Beavin reference and the rejection of these claims under 35 U.S.C. 102(b) should be withdrawn.

Dependent Claims 2 and 17

Applicants have amended claims 2 and 17 to conform with the nomenclature of the claims from which they depend. As noted above, Applicants respectfully assert that Beavin reference does not teach a “query element table,” which is defined to “comprise at least one of a query language command and a command argument” in the independent claim from which these claims depend. Applicants therefore respectfully assert that the Beavin reference does not teach “reading a name of a second query element table from a first query element table” as is claimed by amended claims 2 and 17. Applicants further respectfully assert that the Beavin reference does not teach “reading a plurality of arguments for a query string from the second query element

table” where the “query string comprises a database query command to be executed by a database search engine” as is defined in the independent claim from which these claims depend.

Dependent Claims 4, 19 and 22

As noted above, Applicants respectfully assert that Beavin reference does not teach a “query element table,” which is defined to “comprise at least one of a query language command and a command argument” in the independent claim from which these claims depend.

Applicants therefore respectfully assert that the Beavin reference does not teach “reading one or more names corresponding to one or more source data tables from a first query element table” as is claimed by amended claims 4, 19 and 22.

Dependent Claims 5 and 20

As noted above, Applicants respectfully assert that Beavin reference does not teach a “query element table,” which is defined to “comprise at least one of a query language command and a command argument” in the independent claim from which these claims depend.

Applicants therefore respectfully assert that the Beavin reference does not teach “reading a plurality of names of columns of the one or more source data tables from the second query element table” as is claimed by amended claims 5 and 20.

Dependent Claims 6 and 21

As noted above, a “query string comprises a database query command to be executed by a database search engine” as is defined in the independent claims from which these claims depend. claims 6 and 21 include “concatenating together a first plurality of elements that include the name of one or more source data tables and the plurality of names of columns.” In contrast, the Beavin reference teaches the SQL “JOIN” operation which, as noted by the Examiner, “concatenates all or part of two or more tables to crate a new resulting table.” Applicants respectfully assert that claims 6 and 21 distinguish from the Beavin reference for at least this reason.

Dependent Claims 10, 25 and 32

As noted above, Applicants respectfully assert that Beavin reference does not teach a “query element table,” which is defined to “comprise at least one of a query language command and a command argument” in the independent claim from which these claims depend.

Applicants therefore respectfully assert that the Beavin reference does not teach “reading a second plurality of elements of a query from a second set of one or more query element tables; assembling a data base table storage command string from the second plurality of elements and executing the data base table storage command string in order to modify a target data table” as is claimed by amended claims 4, 19 and 22.

Dependent Claims 14 and 29

Applicants have amended claims 14 and 29 to more clearly identify that the “second plurality of elements contain data used to specify the location in which data elements are to be stored in the target data table.” Applicants respectfully assert that specifying a “location” in which to store data elements “in the target data table” is different than specifying a particular “access path” as is taught in Beavin.

Independent claims 1, 16, 32 and 35 have been amended to distinguish over Beavin. In addition to the above remarks concerning certain dependent claims, dependent claims 2-15, 17-31, 33-34, and 36 depend from claims 1, 16, 32 and 35, respectively, and include all of the limitations thereof. Therefore dependent claims 2-15, 17-31, 33-34, and 36 distinguish over Beavin, for at least the same reasons as the independent claims from which they depend. Therefore, Applicants respectfully assert that the rejection of these claims under 35 U.S.C. 102(b) should be withdrawn.


Conclusion

In view of the foregoing, it is respectfully submitted that the application and the claims are in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is invited to call the undersigned attorney at (561) 989-9811 should the Examiner believe a telephone interview would advance the prosecution of the application.

Respectfully submitted,

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